

CH2M HILL Hanford Group, Inc.	Manual	ESHQ
INDUSTRIAL HYGIENE RESPONSE TO VAPOR CONCERNS	Document	TFC-ESHQ-IH-STD-09, REV A-2
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	Issue Date	October 6, 2005
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1.0 PURPOSE AND SCOPE

(5.1.1)

This standard describes an industrial hygienist's appropriate responses to abnormal odors and vapor exposures. This standard applies to all Tank Farm Contractor (TFC) personnel and subcontractors doing work in the 200 East Area, 200 West Area, and 600 Area controlled by the TFC.

This standard is applied when the TFC shift manager directs implementation of [TF-AOP-015](#) and requests industrial hygiene support in response to reported odors or vapor exposures.

2.0 IMPLEMENTATION

This standard is effective on the date shown in the header.

3.0 STANDARD

1. To adequately assess the potential hazards of a situation, the industrial hygienist may use some or all of the following facility/area information to help assess the situation:
 - Facility/area drawings that show the physical layout of the building and/or area involved: plot the location of each vapor incident in relation to a specific tank farm map and include the Shift Log record number for reference
 - Location of person reporting vapor concern at the time of potential exposure: when possible, detailed questioning of the reporter at the time of the incident may determine the type of vapor and its source
 - Time of potential exposure
 - Meteorological data for the time during which the vapor was noted: contact Hanford Meteorological Station for this information
 - Current information for facility/area hazards (e.g., type of hazard, location of hazard, quantity (amount) of hazard, etc.)
 - Personal exposure data, source and area data, tank waste/vapor data
 - Chemical information for tank/container contents, including:
 - Type of chemical(s)
 - Location and quantity
 - Health hazards
 - Chemical and physical properties (hazards), including:
 - Flammability
 - Toxicity

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- Combustibility
 - Reactivity (incompatibilities)
 - Corrosiveness.
- Materials within facility/area that could initiate a vapor event.
2. All hazard and facility/area information will be provided to occupational medical contractor and the shift manager.
 3. The industrial hygienist will determine monitoring necessary for assessing site conditions and direct the industrial hygiene technician to perform monitoring in response to the vapor concern. Monitoring may include use of a multi-gas monitor, ammonia detector, organic vapor meter, and/or combustible gas meter. The direct reading monitoring procedure ([TFC-ESHQ-S IH-D-22](#)) and instrument-specific procedures contain additional information. All monitoring results, site observations, weather conditions, and recommended actions will be recorded on the Industrial Hygiene Direct Reading Instrument Survey form ([A-6001-760](#)), or an approved equivalent, in accordance with [TFC-ESHQ-IH-STD-03](#).
 4. The shift manager, with assistance from Industrial Hygiene, will complete the Vapor Event Checklist ([A-6003-816](#)).
 5. Using monitoring results and observations, the industrial hygienist will recommend the appropriate controls to be used by personnel in the affected area. Recommendations may include increasing the level of respiratory protection or additional protective clothing. The personal protective equipment procedure ([TFC-ESHQ-S IS-C-02](#)) and the respiratory protection procedure ([TFC-ESHQ-S IH-C-05](#)) contain additional information.

The industrial hygienist may also make recommendations for establishing controls for the type and duration of work in progress in the affected area.

All results and recommendations will be communicated to the occupational medical contractor and the shift manager.
 6. The industrial hygienist and industrial hygiene technician will confirm that site conditions remain stable and vapors are within acceptable levels (below occupational exposure limits) for safe occupancy of the area.
 7. The industrial hygienist will provide information to affected and potentially affected employees regarding odor investigation findings and corrective actions implemented. Investigation results will be reported to staff members within 15 days after the data is analyzed and a quality review of the data is performed

4.0 DEFINITIONS

No terms or phrases unique to this standard are used.

5.0 SOURCES

5.1 Requirements

1. PER 2004-0333. (Management Directed).

5.2 References

1. [TF-AOP-015](#), "Response to Reported Odors or Vapor Exposures."
2. [TFC-ESHQ-IH-STD-03](#), "Exposure Monitoring, Reporting, and Records Management."
3. [TFC-ESHQ-S IH-C-05](#), "Respiratory Protection."
4. [TFC-ESHQ-S IH-D-22](#), "Using Direct Reading Instruments."
5. [TFC-ESHQ-S IS-C-02](#), "Personal Protective Equipment."